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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/845,297	05/01/2001	Akihiro Nakauchi	862.C2217	3006

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EXAMINER
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MATHEWS, ALAN A

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 01/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application N .

09/845,297

Applicant(s)

NAKAUCHI ET AL.

Examiner

Alan A. Mathews

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) 16-55 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 14 and 15 is/are rejected.
- 7) ☒ Claim(s) 8-13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6. 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Species I in Paper No. 7 is acknowledged. The traversal is on the ground(s) that the various embodiments do not require separate fields of search and that Applicant's should not be put through the trouble and expense of filing multiple applications. This is not found persuasive because separate classification is not a requirement of a species restriction. In addition, the Examiner and the PTO would spend a large amount of time examining all the embodiments. If Applicant feels that any allowable claim(s) is/are generic to more than one embodiment, Applicant should point this out to the Examiner and the Examiner will take appropriate action.

The requirement is still deemed proper and is therefore made FINAL.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 2851

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 5-7, 14, and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Nishi et al. (U. S. Patent No. 6,414,743). Nishi et al. discloses in figure 26 and column 55, lines 17-68, and columns 56 and 57, a projection optical system PL. Holding portion 420 (reticle stage) holds optical element R. The mask includes element 470 with transmission portions 470a and 470b (pinholes). Actuator 425 drives the stage 424 and the mask with the pinholes 470a and 470b. The measurement device includes photoelectric elements 472 (see column 55, lines 57-65).

3. Claims 1, 5-7, 14, and 15 are rejected under 35 U.S.C. 102(a) as being anticipated by the PCT Publication W098/48454. The PCT Publication W098/48454 has the same PCT priority application number "PCT/JP98/01776" that U. S. Patent No. 6,414,743 (Nishi et al.) has. The PCT Publication W098/48454 discloses in Figure 26 a projection optical system PL. Holding portion 420 (reticle stage) hold optical element R (see Figure 20). The mask includes element

Art Unit: 2851

470 with transmission portions 470a and 470b (pinholes). Actuator 425 drives the stage 424 and the mask with the pinholes 470a and 470b. The measurement device includes photoelectric elements 472.

4. Claims 1-6, 14 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Taniguchi (U. S. Patent No. 6,333,776). Taniguchi discloses in figure 1 a projection optical system PL and a holding member 6 for the optical element R. The mask is pattern plate 17. Figure 3a discloses one embodiment of a pattern plate 101 with a transmission portion 102 (see column 7, lines 23-30). The actuator for the wafer stage WST is element 25. The pattern plate 17 is fixed to the wafer stage WST. The measurement device is element 19 (see column 5, lines 30-67, column 6 and column 7). Applicant should particularly note column 6, lines 50-67, which discusses the pattern plate 101 having square opening 102 and wherein the amount of light incident on the photoelectric sensor 19 is measured as being an integrated light quantity. Column 5, lines 30 – 31 disclose measuring distortion (aberration).

5. Claims 1-3, 5 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishi (U. S. Patent No. 5,861,944). Nishi '944 discloses in figure 1 a projection optical system PL. A holding portion 54 holds the optical element R. Element 58 in figure 1 is a measurement device for measuring an intensity of light (see column 21, lines 53-55). Figure 9 discloses a mask with a slit-shaped aperture 75 (which is the transmission portion). Figure 10B shows the illumination intensity unevenness S.

***Allowable Subject Matter***

6. Claims 8-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

7. Claims 16-55 are withdrawn from consideration as being directed to nonelected species.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents on Applicant's PTO 1449 are cited for the same reasons Applicant cited them in his INFORMATION DISCLOSURE STATEMENT. The patent to Obsaki is cited to show measuring the light intensity by element 8. The patent to Suzuki et al. is cited to show measurement element 100.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan A. Mathews whose telephone number is (703) 308-1706. The examiner can normally be reached on Monday through Friday from 8:00 AM to 4:30 PM.

Art Unit: 2851

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on (703) 308-2847. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

*Alan A. Mathews*

Alan A. Mathews  
Primary Examiner  
Art Unit 2851

AAM  
January 13, 2003